



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/749,808

12/31/2003

Matthias Wobbe

2058.223US1

5346

50400

7590

06/18/2010

SCHWEGMAN, LUNDBERG & WOESSNER/SAP

P.O. BOX 2938

MINNEAPOLIS, MN 55402

EXAMINER

KIM, TAE W

ART UNIT

PAPER NUMBER

2887

NOTIFICATION DATE

DELIVERY MODE

06/18/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@slwip.com

request@slwip.com

Office Action Summary	Application No. 10/749,808	Applicant(s) WOBBE ET AL.	
	Examiner TAE KIM	Art Unit 2887	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Receipt is acknowledged of the amendment filed on March 29, 2010.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Bauer (US 20030216969 A1).

Re claim 16: Bauer discloses a method of asset management, the assets including objects, the method comprising:

Using interface device, storing information about each of said objects as master data (320, 330, & 340 in fig 3: UPC, Pseudo EPC, 438, 440, & 442 in fig 4: "SKUs," "Serial Numbers," par. 0008: "unique identification number", par. 0031: indemnification information unique to the item... such as serial number or price number." par. 0036: "Stock Keeping Unit (SKU)") in a master data management system(fig 2);

selecting master data including critical object data related to an object (170 in fig 1 & 2) from among the assets;

associating (par 0031: "RFID tag may include identification information unique to the item that the tag is attached") at least one fade out indicator (par 0040: "shelf life",

par 0055: "expiration date", par 0098: "useful life of an item") with the selected master data,

updating the at least one fade out indicator (par 0099: "calculate a reduced shelf life"), based on a change in a condition (par 0099: "a condition when the temperature of a particular area (e.g., refrigerated shelf unit) falls below an acceptable level") of an object corresponding to the selected master data; and

using a radio-frequency identification tag (280 in fig 2) to store the updated at least one fade out indicator (par 0040) with the selected master data (par 0036: "Database 215 may store information associated with each identifier included in the RFID tags." par 0031: "Alternatively, the RFID tag may include item information representing a type and/or associated characteristics of the item,").

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. Apparatus

4. Claims 1-4, 6-8, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 20030216969 A1) in view of Horwitz (US 20030083964 A1).

With respect to claim 1, Bauer discloses an asset management system for the

management of assets, the asset management system comprising:

a master data management system (fig 2) to manage master data (320, 330, & 340 in fig 3: UPC, Pseudo EPC, 438, 440, & 442 in fig 4: "SKUs," "Serial Numbers," par. 0008: "unique identification number", par. 0031: indemnification information unique to the item... such as serial number or price number." par. 0036: "Stock Keeping Unit (SKU)") pertaining to objects selected from among the assets (170 in fig 1 & 2), and to associate at least one fade out indicator (par 0040: "shelf life") with the selected master data, the at least one fade out indicator to be updated (par 0099: "calculate a reduced shelf life"), based on a change in a condition (par 0099: "a condition when the temperature of a particular area (e.g., refrigerated shelf unit) falls below an acceptable level") of an object corresponding to the selected master data and stored with the selected master data (par 0055: "expiration date", par 0098: "useful life of an item", par 0036: "Database 215 may store information associated with each identifier included in the RFID tags," par 0031: "Alternatively, the RFID tag may include item information representing a type and/or associated characteristics of the item,"); and

a radio-frequency identification system (par. 0031, 0133) to enable identification of objects within the master data management system (par. 0031: "an RFID tag may include identification information unique to the item that the tag is attached, such as an a serial number or a price number."), said radio-frequency identification system comprising radio-frequency identification tags coupled to associated objects in said assets (par 0031: "RFID tag may include identification information unique to the item that the tag is attached"), each said radio-frequency identification tag containing detailed

object information (320, 330, & 340 in fig 3: UPC, Pseudo EPC, 438, 440, & 442 in fig 4: “SKUs,” “Serial Numbers,” par. 0008: “unique identification number”, par. 0031: indemnification information unique to the item... such as serial number or price number.” par. 0036: “Stock Keeping Unit (SKU)”, par. 0185-0186), said detailed object information comprising information for said associated object and the updated at least one fade out indicator (par 0036: “Database 215 may store information associated with each identifier included in the RFID tags,” par 0031: “Alternatively, the RFID tag may include item information representing a type and/or associated characteristics of the item,”).

However, Bauer does not discloses or fairly suggests that said detailed information comprising updated information for said associated object after performing physical maintenance or configuration directly to said associated object.

Horwitz however discloses an updated information (0045: “if read/write tags are used, the cluster ID may be stored in a cluster field of each tag”) for said associated object after performing physical maintenance or configuration directly to said associated object (0045: “items are grouped into a cluster according to the normal packaging method”, 0058).

Therefore, it would have been obvious at the time the invention was made to a person having ordinarily skill in the art to incorporate Horwitz’s teaching in the asset management system of Bauer for the purpose of being able to determine cluster ID even when central database is unavailable (Horwitz: 0058).

With respect to claim 2, Bauer modified by Horwitz discloses the asset

management system as set forth in claim 1, wherein an initial version of said detailed object information is placed onto said radio- frequency identification tag by a manufacturer of said associated object (par 0174: “source-tagged”, par 0183: “the EPC writer may record the 12- or 13-digit UPC number electronically at the time when the serial number is assigned and the RFID tag 280 is applied to the package of the item.”).

With respect to claim 3, Bauer modified by Horwitz discloses the asset management system as set forth in claim 2, wherein selections of master data are stored on the radio-frequency identification tag (par 0031: “RFID tag may include identification information unique to the item that the tag is attached”).

With respect to claim 4, Bauer modified by Horwitz discloses the asset management system as set forth in claim 1, wherein critical object information (320, 330, & 340 in fig 3: UPC, Pseudo EPC, 438, 440, & 442 in fig 4: “SKUs,” “Serial Numbers,” par. 0008: “unique identification number”, par. 0031: indemnification information unique to the item... such as serial number or price number.” par. 0036: “Stock Keeping Unit (SKU)”) is stored as master data in the master data management system, and wherein the critical object information (descriptive words, detailed and critical, have boundless and broad meanings.) comprises a subset of said detailed object information stored on said radio-frequency identification tag (par 0183-0185).

With respect to claim 6, Bauer modified by Horwitz discloses the asset management system as set forth in claim 1, wherein the radio-frequency identification system further includes at least one of a radio-frequency transceiver (270 in fig 2), and wherein the radio- frequency transceiver is capable of receiving from and transmitting to

the radio-frequency identification tag the selections of master data (par. 0133: “DCS 160 may acquire the requested data from RFID tags 280 through one or more antenna 270.” par. 0134: “When a corresponding antenna 270 is activated by DCS 160, information within any RFID tags 280 located within a readable proximity of the activated antenna may be retrieved and provided to DCS 160. The RFID tags 280 respond to RF energy emitted by antenna 270, and this response is sensed by reader 262,”)

With respect to claim 7, Bauer modified by Horwitz discloses the asset management system as set forth in claim 1, wherein the master data management system includes dynamic object identification system (fig 2) and the dynamic object identification system includes an object criteria set (par. 0031: “RFID tag may include item information representing a type and/or associated characteristics of the item,” par. 0036: “Stock Keeping Unit (SKU) (i.e., information associated with an item reflecting at least a certain type of product (e.g., item type), made by a certain manufacturer, in a certain size, color, style, etc. or any of the information from par. 0037-0059)”), an object rule set (steps 520-550 in fig 5, steps 610-620 in fig 6, steps 710-780 in fig 7), and an object identification system.

With respect to claim 8, Bauer modified by Horwitz discloses the asset management system as set forth in claim 7, wherein the object criteria set includes variables (any from par. 0037-0059) and possible values, wherein the object rule set includes rules (steps 520-550 in fig 5, steps 610-620 in fig 6, steps 710-780 in fig 7) incorporating the variables (par. 0040: “shelf life”), and the object identification system includes a globally unique identifier (par. 0031: “identification information unique”).

With respect to claim 20, Bauer discloses a computer program product (par 0082), tangibly embodied in an information carrier (par 0082: “magnetic, semiconductor, and/or optical type storage device”), for managing master data pertaining to objects, the computer program product being operable to cause a data processing apparatus to:

store information (320, 330, & 340 in fig 3: UPC, Pseudo EPC, 438, 440, & 442 in fig 4: “SKUs,” “Serial Numbers,” par. 0008: “unique identification number”, par. 0031: indemnification information unique to the item... such as serial number or price number.” par. 0036: “Stock Keeping Unit (SKU)”) about an each of said objects as master data in a master data management system (fig 2);

select master data including critical object data related to an object (170 in fig 1 & 2) from among the assets;

associate (par 0031: “RFID tag may include identification information unique to the item that the tag is attached”) at least one fade out indicator (par 0040: “shelf life”, par 0055: “expiration date”, par 0098: “useful life of an item”) with the selected master data;

update the at least one fade out indicator (par 0099: “calculate a reduced shelf life”), based on a change in a condition (par 0099: “a condition when the temperature of a particular area (e.g., refrigerated shelf unit) falls below an acceptable level”) of an object corresponding to the selected master data; and

cause a radio-frequency transceiver to store the updated at least one fade out indicator with the selected master data and detailed object information about an object (320, 330, & 340 in fig 3: UPC, Pseudo EPC, 438, 440, & 442 in fig 4: “SKUs,” “Serial

Numbers,” par. 0008: “unique identification number”, par. 0031: indemnification information unique to the item... such as serial number or price number.” par. 0036: “Stock Keeping Unit (SKU)”, par. 0185-0186) associated with the master data on a radio-frequency identification tag (280 in fig 2, par 0036: “Database 215 may store information associated with each identifier included in the RFID tags,” par 0031: “Alternatively, the RFID tag may include item information representing a type and/or associated characteristics of the item,”).

However, Bauer does not disclose or fairly suggests that the said detailed object information comprising updated information for said associated object after performing physical maintenance or configuration directly to said associated object.

Horwitz however discloses that the said detailed object information comprising updated information (0045: “if read/write tags are used, the cluster ID may be stored in a cluster field of each tag”) for said associated object after performing physical maintenance or configuration directly to said associated object (0045: “items are grouped into a cluster according to the normal packaging method”, 0058).

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate Horwitz’s teaching in the method of Bauer for the purpose of being able to determine cluster ID even when central database is unavailable (Horwitz: 0058).

With respect to claim 21, Bauer modified by Horwitz discloses the method of claim 16, further comprising storing on the radio-frequency identification tag detailed object information comprising updated information (Horwitz: 0045: “if read/write tags are

used, the cluster ID may be stored in a cluster field of each tag”) for an object associated with the selected master data after performing physical maintenance or configuration directly to said object (Horwitz: 0045: “items are grouped into a cluster according to the normal packaging method”, 0058).

5. Claims 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 20030216969 A1) in view of Horwitz (US 20030083964 A1).

With respect to claim 18, Bauer discloses the method as set forth in claim 16, further comprising: updating of the at least one fade out indicator (par 0099: “calculate a reduced shelf life”) associated with the master data.

However, Bauer does not disclose or fairly suggests updating upon the object being subject to specific physical maintenance.

Horwitz however discloses updating upon the object being subject to specific physical maintenance (Horwitz: 0045: “items are grouped into a cluster according to the normal packaging method”).

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate Horwitz’s teaching in the asset management system of Bauer for the purpose of being able to determine cluster ID even when central database is unavailable (Horwitz: 0058).

With respect to claim 19, Bauer modified by Horwitz discloses the method as set forth in claim 18, wherein the at least one fade out indicator includes at least one of a fade out process (steps 710-720 in fig 7, par 0040, 0201) and at least one of a fade out

endpoint (par 0040, 0201).

6. Claims 9, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 20030216969 A1) modified by Horwitz (US 20030083964 A1) in view of Nicastro (US 20020073114 A1).

With respect to claim 9, Bauer modified by Horwitz discloses the asset management system as set forth in claim 8, wherein the dynamic object identification system assembles the globally unique identifier, wherein the globally unique identifier includes at least one coded segment (par. 0175 & 0182-0183 and Table IV: "EPC"), and wherein the at least one coded segment includes object data selected from a group consisting of at least one of a personal identification number, at least one of an external key, technical data, and administration data (par. 0175: "item type Information, ... serial numbers, SKU information, and manufacturer ID's", par. 0182-0183: "type of item...serial number," Table IV).

However Bauer modified by Horwitz does not disclose or fairly suggest the identifier based at least on user-determined parameters.

Nicastro however discloses an identifier based on user-determined parameters (par 0158: "The requirements or structure of a budget code number can be defined by the user." par 0400: "unique RFQ number... The number can be composed of several different components, such as the project number, or the company number, or other user-defined attributes." par 0440: "unique bid number... The number can be composed of several different components, such as the project number, or the company number,

or other user-defined attributes.”).

Therefore, it would have been obvious at the time the invention was made to a person having ordinarily skill in the art to incorporate Nicastro’s teaching in the asset management system of Bauer modified by Horwitz for the purpose of allowing users to partially customize the identifier.

With respect to claim 10, Bauer modified by Horwitz, and Nicastro discloses the asset management system as set forth in claim 9, comprising the user-determined parameters (Nicastro: par 0158: “The requirements or structure of a budget code number can be defined by the user.” par 0400: “unique RFQ number... The number can be composed of several different components, such as the project number, or the company number, or other user-defined attributes.” par 0440: “unique bid number... The number can be composed of several different components, such as the project number, or the company number, or other user-defined attributes.”).

However Bauer modified by Horwitz, and Nicastro does not discloses or fairly suggests that the parameter comprises of at least one variable from the object criteria set and at least one rule from the object rule set.

Bauer, in further considerations, discloses that the parameter comprises of at least one variable from the object criteria set (any from par. 0037-0059) and at least one rule from the object rule set (steps 520-550 in fig 5, steps 610-620 in fig 6, steps 710-780 in fig 7).

Therefore, it would have been obvious at the time the invention was made to a person having ordinarily skill in the art to incorporate Bauer’s additional teaching in the

asset management system of Bauer modified by Horwitz, and Nicastro for the purpose of creating a unique identifier by incorporating the object criteria and rules.

Incorporating rules and criteria that will produce different outcome for each asset item would ensure the uniqueness of the identifier from one item to another.

With respect to claim 12, Bauer modified by Horwitz, and Nicastro discloses the asset management system as set forth in claim 9, wherein the administration data include contextual data (Bauer: par. 0175: "item type Information", par. 0182-0183: "type of item," Item type can be contextual. For example a bottle of vinegar can be categorized as a cleaning agent or a cooking additive based on the context.)

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 20030216969 A1) modified by Horwitz (US 20030083964 A1), and Nicastro (US 20020073114 A1) in view of Cesar (US 6172596 B1).

With respect to claim 11, Bauer modified by Horwitz, and Nicastro discloses the asset management system as set forth in claim 9.

However, Bauer modified by Horwitz, and Nicastro does not disclose or fairly suggests that the technical data include a multi-level data storage hierarchy, wherein the personal identification number comprises a segmented series of level identification codes, and wherein the series of level identification codes relate to the multi-level data storage hierarchy.

Cesar however discloses that the technical data include a multi-level data storage hierarchy (fig 7, 7A & 7B, col 11 lines 20-28), wherein the personal identification

number comprises a segmented series of level identification codes, and wherein the series of level identification codes relate to the multi-level data storage hierarchy (fig 7, 7A & 7B, col 10 lines 47-52).

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate Cesar's teaching in the asset management system of Bauer modified by Horwitz, and Nicastro for the purpose of structuring an identification number in a manner that illustrates the hierarchical interrelationship among the data.

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 20030216969 A1) modified by Horwitz (US 20030083964 A1), and Nicastro (US 20020073114 A1) in view of Seelinger (US 20020087554 A1).

With respect to claim 13, Bauer modified by Horwitz, and Nicastro discloses the asset management system as set forth in claim 9.

However Bauer modified by Horwitz, and Nicastro does not disclose or fairly suggests that the globally unique identifier includes at least one fade out indicator.

Seelinger, however, discloses that the globally unique identifier (par 0042: "Bar code refers to the symbol, as defined by the Health Industry Business Communication Council (HIBCC) or Uniform Code Council (UCC), affixed to a medication or supply product to identify that item") includes at least one fade out indicator (par 0042: "Bar code may also contain additional information such as ... "use before" or expiration date,").

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate Seelinger's teaching in the asset management system of Bauer modified by Horwitz, and Nicastro for the purpose of making the id code to contain useful information in addition to the standard identifying information. Thus when the id code is decoded a person or a processor can further process the fade-out information along with the identifying information without additional prompts.

With respect to claim 14, Bauer modified by Horwitz, Nicastro, and Seelinger discloses the asset management system as set forth in claim 13, wherein the fade out indicator includes at least one of a fade out process (Bauer: steps 710-720 in fig 7, par 0040, 0201) and at least one of a fade out endpoint (Bauer: par 0040, 0201).

With respect to claim 15, Bauer modified by Horwitz, Nicastro, and Seelinger discloses the asset management system as set forth in claim 14, wherein the fade out process includes one of passing time (Bauer: par 0040, 0201), using an object, and waiting for a condition to appear, and wherein the fade out endpoint includes one of attainment of a fade out date, completion of a fade out period (Bauer: par 0040, 0201), fulfillment of a fade out level of use, and appearance of a condition.

Response to Arguments

9. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. In contrary to the applicant's argument, Bauer discloses updating the at least one fade out indicator (par 0099: "calculate a reduced shelf life"),

based on a change in a condition (par 0099: “a condition when the temperature of a particular area (e.g., refrigerated shelf unit) falls below an acceptable level”) of an object corresponding to the selected master data. In addition, Bauer discloses storing the updated at least one fade out indicator with the selected master data (par 0036: “Database 215 may store information associated with each identifier included in the RFID tags.” par 0031: “Alternatively, the RFID tag may include item information representing a type and/or associated characteristics of the item,”). Bauer discloses that the tag may include item information representing associated characteristics of the item in paragraph 0031, while also disclosing the example information representing associated item characteristics in paragraphs 0037 – 0059.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAE KIM whose telephone number is (571)272-5971. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Paik can be reached on 571-272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tae W Kim/
Examiner, Art Unit 2887

/Seung H Lee/
Primary Examiner, Art Unit 2887